

B1652

S/126/62/014/005/008/015
E193/F583

AUTHORS: Summ, B.D., Goryunov, Yu.V., Pertsov, N.V., Fraskin, V.Yu.
and Shechukin, Ye.D.

TITLE: Propagation of cracks in zinc plates deformed in the
presence of an isolated molten drop of a surface-active
metal

PERIODICAL: Fizika metallov i metallovedeniye, v. 14, no. 5,
1962, 757 - 765

TEXT: In continuation of earlier work (B.D. Summ et al - DAN
SSSR, 1961, 136, 1592) the present authors studied the effect of
locally applied drops of molten mercury and gallium on the resis-
tance of zinc to fracture. The experiments with mercury were
conducted at room temperature on technical grade, 98.7% pure, zinc
specimens, 0.8 - 5.0 mm thick and up to 50 cm wide. Specimens of
this type, gripped at one end in the horizontal position, could be
bent through 90° without formation of visible cracks in the absence
of a surface-active substance. If, however, a drop (0.2 - 40 mg)
of mercury was placed on the upper surface of the test piece in
its central line, 15 - 50mm from the fixed end, a crack was formed

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E195/E583

Propagation of cracks

beneath the mercury drop when the bending moment reached a value producing a constant tensile stress of $7 - 8 \text{ kg/mm}^2$ (in the absence of mercury this stress was barely sufficient to cause a slight plastic strain). The crack absorbed all the liquid mercury in a fraction of a second and continued to increase at a progressively diminishing rate in the direction normal to the tensile stress its length (in the case of a 40 mg mercury drop) after 1, 5 and 240 sec being, respectively, 15, 52 and 120 mm. Depending on the mass m of the mercury drop, the time t required for the crack to reach its final length L varied from 15 min (for larger drops) to several days (for small drops). With increasing m and decreasing thickness d of the specimen, L increased; the variation in L could be described by $L \sim m^{2/3}$ at a constant d . According to the present authors the magnitude of L was determined by two competing processes: a) spreading of the mercury drop on the walls of the crack from the point of application towards the ends of the crack and b) penetration of the mercury into the metal through the walls of the crack. Equations were derived describing the kinetics of these processes. Analysis of these equations showed that the latter process was not due to

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Propagation of cracks

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accelerated volume diffusion alone but was a result of several processes which included the following: formation and growth of a network of ultramicroscopic cracks on the walls of the main crack; spreading of mercury in these cracks by the mechanism of both capillary flow and two-dimensional migration; formation of two-dimensional defects on the walls of the main crack and spreading of mercury on these defects by the mechanism of two-dimensional migration; volume diffusion. If a bending moment considerably longer than the minimum required to trigger-off the process of crack-formation was applied to the zinc plate, microscopic cracks branching-off the main crack were formed; as a result, the final length of the main crack decreased with increasing applied stress. This effect was particularly noticeable in experiments conducted at a constant load as opposed to those conducted at a constant tensile stress. The experiments with gallium were conducted at 35 - 36 °C. In this case, there was a time lag between the application of stress and formation of a crack in the zinc specimen, the time lag decreasing with increasing stress. The rate at which gallium filled the crack was relatively slow and the rate of growth sharply decreased from the moment at which the entire volume of the

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Propagation of cracks

gallium drop was drawn from the specimen surface into the crack. Cracks formed under the action of liquid gallium had a stronger tendency to branch off and the relationship between L and m was described by $L \sim m^{0.5}$. These differences were attributed to the fact that the surface energy of zinc was decreased more by gallium than by mercury and that liquid gallium - in contrast to mercury - did not spread on a flat zinc surface except by the mechanism of surface diffusion. Exploratory experiments of a similar nature were also conducted on cadmium. No crack-formation was observed, in this case, in the presence of liquid mercury. Cracking of cadmium in contact with liquid gallium occurred only at high loading rates; even then, a crack was formed only if the cadmium specimen had been in contact with liquid gallium for at least 20 - 30 min before the stress was applied. There are 5 figures.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M.V. Lomonosova (Moscow State University im. M.V. Lomonosov)

SUBMITTED: March 5, 1962

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41338

S/020/62/146/003/016/019

B101/B144

1/3/30

AUTHORS: Goryunov, Yu. V., Pertsov, N. V., Summ, B. D., Shchukin,
Ye. D.

TITLE: Effect of the microrelief on the rules governing the
propagation of liquid metal on a solid metal surface

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 146, no. 3, 1962, 638-641

TEXT: When the propagation of mercury on a backing of crystalline zinc freed from the oxide film by NH₃ was being studied, two types of propagation dependent on the microrelief were observed for the first time: wetting and diffusion. These processes differ essentially in their mechanisms. On a smooth zinc surface the mercury forms as a drop with the edge of contact $\vartheta = 7^\circ$. A dull spot propagates from the periphery of the drop, showing the time dependence $r \sim t^{0.5}$ which is characteristic of diffusion processes. The mass m of the drop does not affect the propagation velocity. For smooth zinc lamellas dipped obliquely into mercury, this velocity does not depend on the angle of inclination. The rate of

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Effect of the microrelief ...

diffusion increases with rising temperature owing to the temperature dependence of the diffusion coefficient: $D_{surf} \sim \exp(-U/kT)$, where U - activation energy. On zinc surfaces roughened by etching with HNO_3 , the mercury drop forms no constant edge of contact, and the spot propagates by the movement of the liquid Hg layer. The rise of Hg on rough surfaces depends on the angle of inclination of the surface and on the mass of the drop. $r = (6m\Delta\sigma/\pi\eta\delta)^{1/4}t^{1/4}$ holds, which is in good agreement with the experimentally determined dependence $r \sim t^{0.3}$. $\Delta\sigma = \sigma_{32} - \sigma_{12} - \sigma_{31}$, where σ_{12} , σ_{32} , σ_{31} are the specific free surface energies of the liquid at its interface with the medium, the solid at its interface with the medium and the solid at its interface with the liquid, respectively; η - viscosity of Hg, δ - density of Hg. If the smooth surface has a groove in the form of an isosceles triangle with the interior angle α , the Hg will flow along the groove if $\psi < (180 - \alpha)/2$. Examination of the profilograms of differently roughened surfaces confirmed that wetting occurred instead of diffusion if $\alpha \sim 160^\circ$. Conclusions: On an ideally smooth surface, and under the action of surface tension alone, a thin liquid layer will not spread as the migration of liquid atoms

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Effect of the microrelief ...

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B101/B144

reduces the surface energy of the solid ahead of the propagation front. If a surface has no microrelief, no wetting will occur. Similar studies might be of value for analyzing the propagation of liquids on liquid surfaces. There are 4 figures.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova
(Moscow State University imeni M. V. Lomonosov)

PRESENTED: May 23, 1962, by P. A. Rebinder, Academician

SUBMITTED: May 15, 1962

Card 3/3

GORYUNOV, Yu.V.; SUMM, B.D.

Investigating the diffusion of mercury and gallium on zinc surfaces
in connection with the absorption reduction of metal strength.
Fiz. met. i metalloved. 16 no.2:209-216 Ag '63. (MIRA 16:8)

1. Moskovskiy gosudarstvennyy universitet im. M.V. Lomonosova.
(Liquids metals) (Diffusion) (Surface energy)

GORYUNOV, Yu.V.; SUMM, B.D.; SHCHUKIN, Ye.D.; REBINDER, P.A., akademik

Role of kinetic factors in the reduction of metal strength
by adsorption. Dokl. AN SSSR 153 no.3:634-637 N '63.

(MIRA 17:1)

1. Moskovskiy gosudarstvennyy universitet im. M.V. Lomonosova.

AUTO OR: Elegantova, N. I.; Sunn, B. D.; Goryunov, Yu. V.

TIT/F: Effect of prior contact between liquid and solid metal on its adsorptive weakening

SOURCE: Fizika metallov i metallovedeniye, v. 18, no. 5, 1964, 724-729.

TOPIC TAGS: polycrystalline zinc, zinc strength, adsorptive weakening, active site, lattice gallium adsorption, mercury adsorption, metal diffusion, oxide

ABSTRACT: An experimental study was made of the decrease in strength of polyethylene caused by the impact of radioactive isotopes and liquid metal β -metastable deuterium. As shown in Figs. 1 and 2 of the accompanying paper, the decrease in strength of polyethylene is dependent on the amount of energy absorbed by the polymer. The decrease in strength is proportional to the square root of the impact energy. The decrease in strength is proportional to the square root of the impact energy.

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L 25160-65
ACCESSION NR: AP5001242

3

surface which comes into contact with the liquid metal, and also to such factors as temperature, structure and state of the solid, tensile stress applied, and the character of deformation. The presence of surface cracks naturally hastens the diffusion process of the liquid into its diffusion is accelerated if the solid specimen is kept in ammonia rather than in air, which forms a protective oxide film. The rate of internal diffusion depends greatly on grain size and boundary conditions in the solid metal, as well as on the atomic concentration in the adjacent liquid metal. The authors thank N. V. Pertsov and Ye. D. Shchukin for valuable advice. The article has 5 figures.

ASSOCIATION: Moskovskiy gosuniversitet im. M. V. Lomonosova (Moscow state university)

SURMI TED: 2 Jan 64

ENCL: 02

SUB CODE: MM

SP-2000-1000-100

REF ID: A64

Card 2/4

L 25160-65

ACCESSION NR: AP5001242

ENCLOSURE: 01

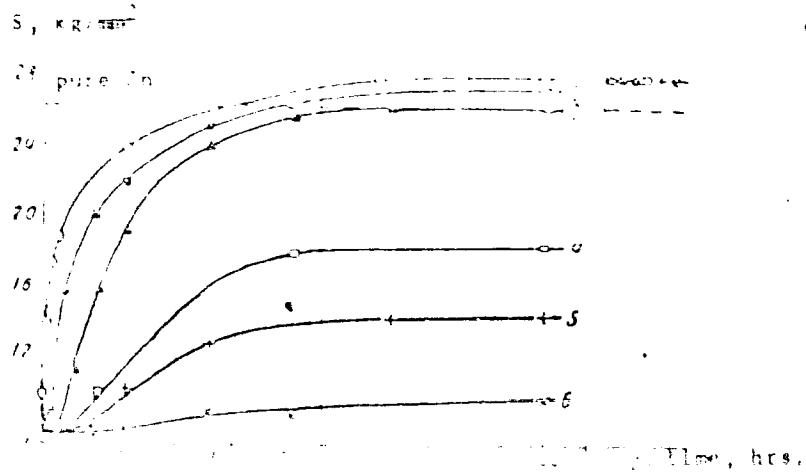


Fig. 1. Dependence of the strength (S) of polycrystalline zinc on the duration of prior contact with Hg at various values of the parameter $\tau_0 = M_0/M_t$: 1 - 0.0003, 2 - 0.001, 3 - 0.002, 4 - 0.003, 5 - 0.007, 6 - 0.01.

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L 25160-55

ACCESSION NR: AP5001242

ENCLOSURE: 02

 $S, \text{ kg/cm}^2$

20

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0

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50

60

70

80

90

100

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120

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140

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200

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270

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3100

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REF ID: A653920005-0

29
27
6

100% COTTON 12 ERS

RECORDED IN MATERIALS INDEX ON 3, 1965, 250-354

TOPIC TAGS: zinc, mercury coated/zinc, zinc strength, strength deterioration coating, absorption-active, surface active, coating, metal deterioration coating, induced de-

TERMINAL: The effect of a thin layer of absorption-active metal, deposited on a relatively large area of a metal plate, on the formation of macrocracks has been investigated. It was found that a thin film of commercial-grade zinc deposited from thiocyanate up to 100 mm wide by immersion in a 3% $HgCl_2$ solution for a time sufficient to obtain the desired amount of plating per unit of area could completely inhibit bend tests at room temperature. It was found that the width of the strip required to do this varied, under the conditions used, from 10 to 100 mm, depending upon the thickness of the metal, and varying also with η , which varied in the range of 0.35 mg/mm² depending

Card 12

FLEGONTOVA, N.I.; SUMM, B.D.; GORYUNOV, Yu.V.

Effect o. the preliminary contact of a liquid metal with a solid
one on the adsorption decrease of strength. Fiz.met. i metalloved.
18 no.5:724-729 N '64. (MIRA 18:4)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova.

L 14429-66 EWT(m)/EWP(w)/EPF(n)-2/T/EWP(t)/EWP(b) IJP(c) JD/WW/JU/HB
ACC NR: AP6002109 SOURCE CODE: UR/0369/65/001/006/0643/0647

AUTHOR: Traskin, V. Yu.; Goryunov, Yu. V.; Den'shchikova, G. I.; Summ, B. D.

ORG: Moscow State University im. M. V. Lomonosov (Moskovskiy gosudarstvennyy universitet)

TITLE: Some aspects of adsorptive decrease in the strength of polycrystalline zinc in the presence of gallium

SOURCE: Fiziko-khimicheskaya mehanika materialov, v. 1, no. 6, 1965, 643-647

TOPIC TAGS: zinc, gallium, brittleness, free energy, nonferrous liquid metal

ABSTRACT: The brittle failure of polycrystals in contact with metallic melts is thought to be closely related to the adsorption of the melt on the grain boundaries (surfaces of excess free energy). Since the extent of the adsorption depends on the concentration of the adsorbed substance, the authors attempted to determine the quantitative relationship between the drop in the strength of a polycrystalline metal and the mass of the surface-active melt in contact with it. In the experiments, gallium was electrodeposited on zinc plates. After the electrodeposition, the plates were extended at the rate of 2 cm/min at room temperature (gallium being still in the molten state), and the dependence of the

L 14429-66
ACC NR: AP6002109

strength P of the samples was studied as a function of the quantity of gallium $q = m/S$ per unit area of the external surface. It was found that the decrease in the strength of zinc polyerystals coated with gallium is due mainly to the decrease in the free energy at the grain boundaries as a result of the adsorption of gallium atoms. A quantitative scheme of the failure process is proposed which accurately reflects the linear character of the dependence $P = P(q)$ and permits a correct estimate of the strength of gallium-coated zinc as a function of the quantity of gallium and the structure and thickness of the sample. On this basis, all the factors promoting the adsorptive decrease in the strength of metals are divided into two main groups: (1) intensive factors, which affect the degree of weakening of the interatomic bond in the solid metal, and (2) extensive factors, which determine the proportion of weakened bonds relative to the total number of bonds broken when the sample fails. Authors are deeply grateful to Ye. D. Shchukin, Dr. of Physicomathematical Sciences, for valuable suggestions during the discussion of this work. Orig. art. has: 2 figures and 5 formulas.

SUB CODE: 11, 07 / SJBM DATE: 20Jan65 / ORIG REF: 009 / OTH REF: 001

Liquid metal corrosion 16, 44, 35
brittleness 14

Card 2/2

L 14428-66 EWT(m)/EWP(w)/T/EWP(t)/EWP(b) IJP(c)
ACC NR: AP6002110 SOURCE CODE: UR/0369/65/001/006/0648/0653
UR/JC/WB

AUTHOR: Summ, B. D.; Ivanova, L. V.; Goryunov, Yu. V.

ORG: Moscow State University im. M.V. Lomonosov (Moskovskiy gosudarstvenny universitet)

TITLE: Influence of metals dissolved in mercury on the adsorptive decrease in the strength of zinc

SOURCE: Fiziko-khimicheskaya mekhanika materialov, v. 1, no. 6, 1965, 648-653

TOPIC TAGS: zinc, mercury, gallium, bismuth, lead, indium, thallium, cadmium, tin, tensile strength, adsorption, nonferrous liquid metal

ABSTRACT: The adsorptive decrease in the strength of polycrystalline zinc during its deformation was studied in the presence of various two-component mercury solutions. The metals added to mercury were cadmium, gallium, indium, lead, thallium, tin, and bismuth, which do not form chemical compounds with mercury or zinc at room temperature. When small amounts of these metals dissolve in mercury, the adsorption activity of the melt relative to zinc increases, causing an additional adsorptive decrease in the strength of zinc. At high concentrations of indium or thallium, the adsorption

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L 14428-66
ACC NR: AP6002110

10.

activity of the melt drops substantially. The length of macroscopic failure cracks formed during bending of zinc plates in the presence of a locally deposited drop of an adsorption-active melt increases when gallium, bismuth, lead, and small amounts of indium or thallium dissolve in the mercury; when cadmium, tin, and large amounts of indium or thallium are dissolved, however, the length of such cracks decreases. Thus, the dissolution of various amounts of metals in adsorption-active melts constitutes an effective method of modifying the mechanical properties of a solid metal deformed in contact with such a melt. Authors are deeply grateful to V. N. Pertsov and Ye. D. Shchukin for valuable suggestions during the discussion of the results. Orig. art. has: 3 figures and 2 tables.

SUB CODE: 07, 11 / SUBM DATE: 10Feb65 / ORIG REF: 010 / OTH REF: 001

brittle failure 44, 35

liquid metals corrosion 44, 35

liquid metal

BR
Card 2/2

"APPROVED FOR RELEASE: 08/26/2000

CIA-RDP86-00513R001653920005-0

APPROVED FOR RELEASE: 08/26/2000

CIA-RDP86-00513R001653920005-0"

Na it gives an isomer, b. 204°, d_4^{20} 0.81262, n_D^{20} 1.48751,
 μ_D^{20} 1.49357, μ_D^{20} 1.30058. Hydrogenation of the original
 hydrocarbon over Pt gives the normal std. hydrocarbon,
 C₆H₆ (I), b. 203°, d_4^{20} 0.76745, n_D^{20} 1.42918, μ_D^{20} 1.43134.

only 6 H atoms are taken up to give the ethylenic compound $\text{EtCH}(\text{CH}_2)\text{CHCH}_2$ (III), b. 188°, d₄²⁵ 0.77556, m.p. 143.74, sp. 1.43041, sp. 1.44504, m.p. 145.007. The structure is proved by oxidation to EtCHCO_2H . II hydrogenates to I over Pt.

110.02 METALLURGICAL LITERATURE CLASSIFICATION

~~43041 BOWMINT
831137 ONE OUT 101~~

ERESTINSKIY, V. N., SUMM, M. I.

"On the Action of Hypochlorous Acid on Tetramethyl-1,1,4,4-Butine-2-Diol-1,4.".

Zhur. Obshch. Khim., 14, No. 10, 1938, Lab. of Chemistry, Academy of Forestry

Engineering Leningrad. Received 5, Dec. 1939.

Report U-1627, 11 Jan. 52

SUMM, N.

Chemical Abst.
Vol. 48 No. 5
Mar. 10, 1954
Organic Chemistry

New transformation type of isomers. VI. The action of chlorine on α -terpinene. D. Tishchenko and N. Suman. J. Gen. Chem. U.S.S.R. 27, 801-8 (1952) (Engl. translation). VII. Preparation of alcohols and ethers from chloroterpines. D. Tishchenko, A. Khovanskaya, and T. Danilova. Ibid. 805-70. See C.A. 47, 5382i, 5383i. VIII. Synthesis of α -dipenten-6-ylacetocetic and α -dipenten-6-ylmalonic esters and the products of their cleavage. D. Tishchenko and V. Foliadov. Ibid. 999-1002.—See C.A. 47, 8041d. H. L. H.

MF
1-21-54

GUT, N. I.

GUT, N. I.: "The effect of chlorine on terpenes with conjugate double bonds (alpha-terpinene and beta-pyronene)." Leningrad Order of Lenin State U imeni A. A. Zhdanov. Leningrad, 1956.
(Dissertation for the Degree of Candidate in Chemical Science)

Source: Knizhnaya Letopis' No. 23 1956 Moscow

Schemer

79-2-23/58

AUTHORS: Tishchenko, D. and Summ, N.

TITLE: About the Structure of Pyronenes (O stroyenii pironenov)

PERIODICAL: Zhurnal Obshchey Khimii, 1957, vol 27, No 2, pp. 379-384 (U.S.S.R.)

ABSTRACT: Investigations were conducted to establish the authenticity of the structural formulas of pyronenes as introduced by Dupont-Dulou (2). None of the formulas were found to have sufficient bases. Ozonolysis and oxidation of beta-pyronene with potassium permanganate showed that it is not identical with the beta-pyronene described by Dypont but rather a mixture of more than 80% 1,1,3-trimethyl-2-methylenecyclohexene-3 and less than 20% of 1,1,2,3-tetramethylcyclohexadiene-2,4. The correctness of structural formulas for gammaphyrone, alpha and delta-pyronenes was also found as highly doubtful. It is shown how unreliable structural formulas can be when they are written on the basis of conversions not excluding the isomerization phenomena, certain qualitative reactions, etc.

Card 1/2

79-2-23/58

About the Structure of Pyronenes

There are 8 references of which 1 is Slavic.

ASSOCIATION: Forestry Engineering Academy imeni S. M. Kirov

PRESENTED BY:

SUBMITTED: February 10, 1956

AVAILABLE: Library of Congress

Card 2/2

"APPROVED FOR RELEASE: 08/26/2000

CIA-RDP86-00513R001653920005-0

APPROVED FOR RELEASE: 08/26/2000

CIA-RDP86-00513R001653920005-0"

SUMMER, J.

New development of the pneumatic hammer drill. p. 299

Production of drill crowns in the German Democratic Republic. p. 302

RUDY Vol. 3, no. 10, Oct. 1955

Czechoslovakia

Source: EAST EUROPEAN LISTS

Vol. 5, no. 7 July 1956

KACZMAREK, Jan, prof. dr inz.; SUMER-BRASON, Krzysztof, mgr inz.

Influence of the state of strain on the wear during grinding with
loose abrasive. Przegl mech 23 no.13:353-360 10 Jl '64.

1. Head, Institute of Machining, Krakow, and Head, Department of
Machining of Metals, Technical University, Krakow (for Kaczmarek)
2. Department of Machining of Metals, Technical University, Krakow
(for Summer -Brason).

GOTEV, N.; SUMNALIEV, M.; ZHECHEVA, M.

A case of the pulmonary form of tularemia. Suvr. med. 14 no.12:
42-45 '63.

PETROVSKI, Sv. N.; SUMNALIEV, M. I.

Microbiological diagnosis of tuberculous bacteria in sputum with the
use of a fluorescence-bacterioscopic method under the visible light.
Suvr. med. 12 no.6:81-89 '61.

1. Iz Obshtoarmeiskata bolnitsa (Nachalnik Angelov) i Nauchnoizsledo-
vatelski voennomeditsinski institut. (Nachalnik L. IAnchev)

(MYCOBACTERIUM TUBERCULOSIS) (SPUTUM microbiol)
(MICROSCOPY)

SUMNALIEV, S.

Question on designing fabrics. p. 37

TEKSTILNA PROMISHLENOST. (Ministerstvo na lekata promishlenost) Sofia, Bulgaria.
Vol. 8, no. 7, 1959

Monthly List of East European Accessions (EEAI), LC Vol. 8, no. 7, 1959 Nov.
Uncl.

SUMNIEVICH, M.G.

KVASNIKOV, Ye. I.; SUMNIEVICH, M.G.

Lactobacillus in epiphytic microflora in plants of central Asia.
Mikrobiologiya, Moskva 22 no.3:267-274 May-June 1953. (CIML 25:5)

1. Agricultural Institute of the Academy of Sciences Uzbek SSR,
Tashkent.

KVASINKOV, E.I.; SUMNEVICH, M.O.

[Microbiological principles of the ensilage of fodder in
Uzbekistan] Mikrobiologicheskie osnovy silosovaniia kormov
v usloviakh Uzbekistana. Tashkent, Izd-vo Akad. nauk
UzSSR, 1953. 101 p.
(MIRA 16:1)
(Ensilage)

SUMNEVICH, M.G.

Epiphytic microflora of some cultivated and wild plants of Uzbekistan.
Uzb. biol. zhur. no.1:3-8 '61. (MIRA 14:3)

1. Institut botaniki AN UzSSR.
(UZBEKISTAN—BACTERIA)

DUPAL, Jaroslav [Dupal, Jaroslav]; GAVLICHEK, Jaromir [Havlicek, Jaromir]; STOCKES, Ferdinand [Stoces, Ferdinand]; BARTUNEK, Iosif [Bartunek, Josef]; LEVITMAN, Ye.A.[translator]; TULUPNIKOV, A.I., red.; SUMNIK, Z.A., red.; IL'YUSHENKOVA, T.P., tekhn. red.

[Problems in determining the effectiveness of agricultural production in Czechoslovakia] Voprosy opredeleniya effektivnosti sel'skokhoziaistvennogo prizvodstva v Chekhoslovakii. Pod red. A.I.Tulupnikova. Moskva, Gosstatizdat, 1962. 178 p.

Translated from the Czech. (MIRA 15:11)

1. Nauchno-issledovatel'skiy institut narodnokhozyaystvennogo planirovaniya pri Gosudarstvennoy planovoy komissii, Chekhoslovakija (for Dupal, Gavlichek). 2. Gosudarstvennaya planovaya komissiya, Chekhoslovakija (for Bartunek).

(Czechoslovakia--Agriculture--Economic aspects)

NEMCHINOV, V.S., red.; MINTS, L.Ye., red.; SEREBROVSKIY, L.A., red.;
SUMNIK, Z.A., red.; FYATAKOVA, N.D., tekhn.red.

[Methods and algorithms for solving the transportation
problem; collected articles] Metody i algoritmy resheniya
transportnoi zadachi; sbornik statei. Moskva, Gosstatiz-
dat. No.1. 1963. 149 p. Translated from (MIRA 17:3)
the English and German.

SEZOUSKA, Irzid [Sezouska, Jiri], inzh.; VITLACHIL, Iosif [Vytlačil, Josef], inzh.; VALTER, Jaromir [Walter Jaromir]; CHUMAT, Ya.A. [translator]; SUMNIK, Z.A., red.

[Study of the supply and demand of the population]
Izuchenie potrebleniia i sprosa naseleniiia. Moskva,
Izd-vo "Statistika," 1964. 328 p. (MIRA 17:6)
Translated from the Czech.

SUMNIKOVA, T.

Vol. 36 of "Zinatniskie raksti" of the P. Stucka Latvian State University. Reviewed by T. Sumnikova. Vestis Latv ak no.9:149-151 '61.

Sumonov, V.

AID P - 1006

Subject : USSR/Aeronautics
Card 1/1 Pub. 58 - 7/16
Authors : Sumonov, V., Master of Sport and Sheremetev, B., Designer
Title : What kind of gliders do the DOSAAF organizations need?
Periodical : Kryl. rod., 1, 11-13, Ja 1955
Abstract : The authors discuss the article "What kind of mass-produced glider we need" published in the Nov. 1954 issue of this periodical. They discuss the purpose of such a glider. Some data of other gliders are given. Photo.
Institution : All-Union Voluntary Society for the Promotion of the Army, Aviation and the Navy (DOSAAF)
Submitted : No date

SUMOROKOVA, T.N.; MODESTOVA, T.P.

Fusibility of the system PbCl₂- NaCl. Zhur. neorg. khim. 6
no.3:679-861 Mr '61. (MIRA 14:3)

1. Institut khimii AN Kazakhskoy SSR.
(Lead chloride)
(Salt)

SUMOVSKAYA, Antonina Yefimovna

Of the Question about the Functional State of the Uterus and Fallopian
Tube Concerning Sterile Women

Dissertation for candidate of a Medical Science degree. Chair of Obstetrics
and Gynecology (head, Prof. O.S. Parsamov) Saratov Medical Institute, 1954.

SHILKO, N.A., dotsent; SUMOVSKAYA, A.Ye., kandidat meditsinskikh nauk;
FEDINA, N.N.

Isopromedol as an analgesic in labor. Akush. i gin. no. 4:59-61
(MLRA 9:1)
J1-Ag '55.

1. Iz kafedry akusherstva i ginekologii pediatriceskogo fakul'teta
Saratovskogo meditsinskogo instituta.
(ANALGESICS,
isopromedol in labor)
(LABOR, anesth. and analgesia
isopromedol)

... A., r.v.; MICHAYA, A.Ye., kand. med. nauk

stillbirth and the tasks of the obstetricians-gynecologists of
the Volga Valley Railroad in its control. Sbor. nauch. rab. Sar.
vcs. med. inst. 44:335-339 '64. (MIRA 18:7)

1. Glavnyy akushер-ginekolog dorozhnoy klinicheskoy bol'nitsy
privolzhskoy chelnyy derogi (for Dorednova).

1980-1981. Saratov, Russia

1. Sovet gosudarstvennyi universitet po obrazovaniyu detskoj i podtsepelicheskoy meditsiny (Saratov State University of Pediatrics and Child Health). Saratov, Russia. Inst. 44:349-
450 (1980) (VINITI No. 144-81)

2. Sovet gosudarstvennyi universitet po obrazovaniyu kliniki pediatrii i skorogo meditsinskogo resaneniya (Saratov State University of Clinical Pediatrics and Emergency Medical Care). Saratov, Russia. Inst. 44:349-450 (1980) (VINITI No. 144-81)

DANIAKHIY, M.A., prof.; PAVKINA, A.G.; SUMOVSKAYA, A.Ye.; MOLOTKOVA, V.V.;
ILOVAYSKAYA, K.S.

Cytological picture of vaginal secretion in normal and pathological
pregnancy. Akush. i gин. 34 no.6:23-26 N-D '58. (MIRA 12:1)

1. Iz akushersko-ginekologicheskoy kliniki Saratovskogo meditsinskogo
instituta.

(PREGNANCY, physiol.
vaginal secretion, cytol. (Rus))

(VAGINA, physiol.
secretion in pregn., cytol. (Rus))

Yekaterinburg, Ural'skiy krai, Russia, 1970

Bleeding in the third period of labor and in the early postnatal period. Sber. nauch. rab. Star. gos. med. inst. 44:340-344 '64. (IFRA 15)

1. Podil'kova - sotsial'naya gospodinstvo klinicheskoy bol'ницы privolzhskoy sel'skoy dergi, Saratov. 2. Nachal'nik okushensko-pinkologicheskogo ob'yedineniya, Saratov (for Tukhtins).

POLINSKIY, P.A., kand. tekhn. nauk; SUMOVSKIY, B.Ya., inzh.

Allowed extent of the interlacing of axes of connecting
rod heads of a trunk engine. Vest. mashinostr. 44 no.5.
50-51 My '64. (MIRA 17;6)

SUMPER, A.

SUMPER, A. Results of the vocational training in the footwear industry during
1955. p. 166.

Vol. 11, no. 7, July 1956
PRZEGLAD SKORYANY
PHILOSOPHY & RELIGION
Warszawa, Poland

SO: East European Accession, Vol. 6, No. 3, March 1957

SUMPER, A.

The problem of training cadres in the shoe industry. p. 29.
(Przeglad Skorzany, Vol. 12, No. 1, Jan. 1957, Krakow, Poland)

SO: Monthly List of East European Accessions (EEAJ) Lc. Vol. 6, No. 8, Aug 1957. Uncl.

IANEV, El.; SUMROV, Iv.; DZHANKOV, Iv.

Complement fixation reaction in the diagnosis of leptospiroses.
Izv Vet inst zaraz parazit 7 111-121 '63.

IANEV, Kl.; SUMROV, Iv.; DZHANKOV, Iv.

Application of a quick agglutination method in the diagnosis
of leptospiroses. Izv Vet inst zaraz parazit 8:99-105 '64

STROICHEV, S.; KRUSTEV, M.; SHAVKOV, I.; SUKHOV, I.

Experiments in preparing vaccines against hen typhus. Izv Vet
inst zaraz parazit 8:177-182 '64

SUMROV, M.

Results of fulfillment of the plan for lowering the cost production of industrial products in 1956. p.5.

(LEKA PROMISHLEVOST, Vol. 6, no. 3, 1957. Sofia, Bulgaria.)

SO: Monthly List of East European Accessions (EEAL) IC, Vol. 6, no. 12, December 1957 Uncl.

SIRHOV, M.

"Reserves for reducing the net cost of the light industry production."

p. 6 (Loka Promishlenost, Vol. 6, no. 12, 1957, Sofiia, Bulgaria.)

Monthly Index of East European Accessions (EIAI) LC, Vol. 7, No. 6, June 1958.

ILIKOV, N.; SURIKOV, M.

Possibilities of unifying the production of various branches
in the shoe industry. Pt.1. Kozhi Sofia 4 no.3:1-2 '63.

ILIEV, N.; SUMROV, M.

Impending tasks of the leather, fur, and shoe industries.
Kozhi Sofia 4 no. 8 1-2 '63.

ILIEV, N.; SUMROV, M.

Possibilities of creating branch production unification in the
shoe industry. Pt. 2. Kozhi Sofia 4 no. 4:1-3 '64.

SUMROV, M.

The leather, fur, and shoe industries in the years of the
people's rule. Kozhi Sfia 5 no.6:13-14 '64.

SUMRYAKOV, A.B.

Efficient utilization of the heat of condensates. Bum.prom.
38 no.9:24-26 S '63. (MIRA 16:11)

1. Glavnyy konstruktor Gosudarstvennogo instituta po proyektirovaniyu preipriyatiy tsnellyuloznoy i bumazhnoy promyshlennosti.

SUMRYAKOV, A.B.

Stock tanks with new circulation systems. Bum. prom. 38
no.11:11-13 N '63. (MIRA 17:1)

1. Gosudarstvennyy institut po proyektirovaniyu predpriyatiy
tsellyuloznoy i bumazhnoy promyshlennosti.

MIKHEL'SON, V. A.; MANEVICH, A. Z.; LUKICH, V. L.; ERIVANTSEV, N. A.;
SVADZHAN, Z. P.; SUM-SHIK, I. Ye.

Use in the hospital of UNAP-2 anesthesia apparatus. Nov. med. tekhn.
no.3:14-18 '61. (MIRA 14:12)

1. I Moskovskiy ordena Lenina meditsinskiy institut imeni I. M.
Sechenova.

(ANESTHESIOLOGY--APPARATUS AND INSTRUMENTS)

AEROV, M.E.; CORECHENKOV, V.G.; MOLOKANOV, Yu.K.; SUM-SHIK, L.Ye.; SKOBLO, A.I.; KHALIF, A.L.; BROZIN, I.A.; SATTAROV, U.G.

Effectiveness and maximum loads of industrial absorbers with various bubble trays. Gaz. prom. 6 no.11:35-38 '61. (MIRA 15:1)
(Mass transfer) (Plate towers)

SUM-SHIK, L.Ye.; AEROV, M.E.; BYSTROVA, T.A.

Hydrodynamic calculation of columns with nonoverflowing plates.
Khim.prom. no.7:530-532 J1 '62. (MIRA 15:9)
(Plate towers)

SUM-SHIK, I.Ye.

Analysis of some early complications of tracheal intubation.
Khirurgiia no.9:120-123 '62. (MIRA 15:10)

1. Iz kliniki fakul'tetskoy khirurgii sanitarno-gigiyenicheskogo
fakul'teta (zav. - zasluzhennyy deyatel' nauki prof. I.S.Zhorov)
I Moskovskogo ordena Lenina meditsinskogo instituta imeni I.M.
Sechenova.

(INTRATRACHEAL ANESTHESIA)

SUM-SH IK,M.R., inzhener

Standardization of gearing used in machinery construction.
Standartizatsiia no.6:31-37 N-D'54. (MIRA 8:10)

1. Eksperimental'nyy nauchno-issledovatel'skiy institut me-
tallorezhushchikh stankov
(Gearing--Standards)

SUM-SHIK, M.R., inzhener.

Simplification and standardization in lathe construction. Stroi, i dor.
mashinostr. 1 no.4:28-31 Ap '56. (MLRA 10:1)
(Lathes)

SUM-SHIK, M.R., inshener.

Standardization in the machine tool industry. Standartizatsiya
no.6:70-71 M-D '56. (MLBA 10:1)

1. Byure normalizatsii Ekperimental'nego nauchno-issledobatel'skogo
instituta stankostroyeniya.
(Machinery industry--Standards)

SUM-SHIK, M.R., inshener.

Specialization and centralized production in the machine-tool
industry. Standartizatsiia no.1:22-25 Ja-F '57. (MLRA 10:5)

1. Ekspertimental'nyy nauchno-issledovatel'skiy institut metallorezhu-
shchikh stankov.

(Machine-tool industry)

SUN-SHINE NY R

PHASE I BOOK EXPLOITATION 1213

USSR. Komitet standartov, mer i izmeritel'nykh priborov

Materialy 2-go i 3-go soveshchaniy po standartizatsii i normalizatsii v mashinostroyenii (Materials of the Second [Dec. 1956] and Third [May 1957] Conferences on Standardization and Normalization in Machine Building) Moscow, Standartgiz, 1958. 135 p. 2,000 copies printed.

Resp. Ed.: Krynnik, K.M.; Ed. of Publishing House: Rozova, L.V.; Tech. Ed.: Matveyeva, A.Ye.

PURPOSE: This collection of articles is intended for designers and engineering specialists.

COVERAGE: The book contains abbreviated versions of lectures given during the 2nd and 3rd Scientific Methodology Conferences held in December 1956 and May 1957 respectively. The first part of the book reviews the significance of introducing into Soviet engineering practices a system of preferred numbers based on recommendation of the International Standards Organization (ISO). The second part of the book generalizes on the experimental studies of standardization and unification conducted by various machinery-manufacturing branches

Card 1/3

Materials of the Second (Cont.) 1213

of Soviet industry. No personalities are mentioned. There are no references.

TABLE OF CONTENTS:

From the Publisher 2

PART I. SERIES OF PREFERRED NUMBERS AND THEIR IMPORT-
ANCE IN ESTABLISHING RATIONAL PARAMETERS AND DIMENSIONS
OF MACHINES, EQUIPMENT, AND TOOLS

Tkachenko, V.V., Candidate of Technical Sciences. Sets of Preferred numbers 5

Sum-Shik, M.R., Engineer. Application of Series of Preferred Numbers in
Machine-tool Manufacturing 13

Vaksman, A.V., Candidate of Technical Sciences. New Dimensional Series
of Milling Cutters Established in Conformance With Number of Machine-
tool Revolutions 27

PART II. EXPERIMENTS WITH STANDARDIZATION AND
UNIFICATION OF BASIC PARAMETERS OF MACHINES AND
EQUIPMENT

Card 2/3

SUM-SHIK, M.R.

BARSUKOV, A.A., inzh., laureat Leninskoy premii; BORISOV, Yu.S., inzh.; VAKS, D.I., inzh.; VLADZYEVSKIY, A.P., doktor tekhn. nauk; prof., laureat Stalinskoy premii; GINZBURG, Z.M., inzh.; GLIMMER, Y.Ye., inzh.; ZOBIN, V.S., inzh.; KAZAK, M.I., dots.; KAMINSKAYA, V.V., kand. tekhn. nauk; KEDRINSKIY, V.N., inzh., laureat Leninskoy premii; KUCHER, A.M., kand. tekhn. nauk; KUCHER, I.M., kand. tekhn. nauk; LEVINA, Z.M., inzh.; LUK'YANOV, T.P., inzh.; MOROZOVA, Ye.M., inzh.; NOSKIN, P.A., kand. tekhn. nauk, dots.; NIBERG, N.Ya., kand. tekhn. nauk; OSTROUMOV, G.A., inzh.; PLOTKIN, I.B., inzh.; SPIVAK, E.D., kand. tekhn. nauk; SUM-SHIK, M.R., inzh.; SHASHKIN, P.I., inzh.; SHIFRIN, S.M., inzh.; YAKOBSON, M.O., doktor tekhn. nauk, prof.; GLIMMER, B.M., inzh., red.; SOKOLOVA, T.F., tekhn. red.

[Handbook for mechanics of machinery plants in two volumes]
Spravochnik mekhanika mashinostroitel'nogo zavoda v dvukh tomakh.
Vol.1. [Organization and design preparation for repair work]
Organizatsiya i konstruktorskaya podgotovka remontnykh rabot.
Otv. red. toma R.A. Noskin. 1958. 767 p. Moskva, Gos. nauchno-
tekhn. izd-vo mashinostroit. lit-ry. (MIRA 11:8)
(Machinery—Maintenance and repair)

28(1)
25(6)(2)

S/028/60/000/03/004/029
D041/D006

AUTHORS: Sum-Shik, M.R., and Lyubomirskiy, E.I.

TITLE: The Normalization of Cam Drives in Machine Tool Building

PERIODICAL: Standartizatsiya, 1969, p 3, pp 13-17 (USSR)

ABSTRACT: New standards ("normali") for the parts and components of cam drives, completed by the Eksperimental'nyy nauchno-issledovatel'skiy institut metallorezhushchikh stankev - ENIMS (Experimental Scientific Research Institute of Metal Cutting Machine Tools) are herewith published. The standardization concerns rollers, axles, the blanks of cam discs and drums. The outer diameter of the roller, which determines the geometrical, kinematic, and power characteristics of the cam drive, has been accepted as the basic parameter in standardization. ENIMS has now worked out a new method of shaping cams for auxiliary

Card 1/2

S/028/60/000/03/004/029
D041/D005

The Normalization of Cam Drives in Machine Tool Building

motion stretches. There are 2 tables, 1 chart, 4 diagrams, and 1 Soviet reference.

Card 2/2

SUMSKAS, S.

A universal apparatus for simultaneous reposition of fractures of long bones of the extremity. Sveik. apsaug. 6 no.9(69):30-36 S '61.

1. Respublikine Klaipedos ligonine.

(FRACTURES ther)

SUMSKAS, S.

Result of the reposition of long bone fractures with author's apparatus. Sveik. apsaug. 7 no.8:45-46 '62.

1. Resp. Klaipedos ligonine.
(FRACTURE FIXATION)

SUMASKAYA, A. M.

USSR/Medicine - Literature

Nov/Dec 48

"Annotated List of Articles Received by the Editor" 4 3/4 pp

"Pediatriya" No 6

Reviews 12 articles, among them "Penicillin Treatment of Pneumonia According to the Data of Polyclinics and Consultation Groups," by I. L. Frenkel', and "Cases of Tickborne Encephalitis With a Cyclical Course," by A. M. Sumaskaya.

PA 61/49T62

SUNSKAYA, A.N.

Effect of various therapeutic doses of glutamic acid on the higher nervous activity of children suffering from neuropsychic diseases.
Trudy Inst. vys. nerv. deiat. Ser. patofisiol. 8:127-133 '61.

(MIRA 15:1)

(GLUTAMIC ACID—PHYSIOLOGICAL EFFECT)
(NERVOUS SYSTEM) (METAL ILLNESS)

SUMMARY

85-9-4/33

AUTHORS: Ryabov N.; Pryakhina N., Master of Sports; Sumskiy, B., Pilot-Instructor, Aeroclub of Zaporozhskaya Oblast'; Vanin P., Deputy Head of the Orsk Aeroclub for Political Matters

TITLE: To Meet the 40th Anniversary of the Great October Revolution (Navstrechu 40-letiiyu velikogo oktyabrya)

PERIODICAL: Kryl'ya Rodiny, 1957, Nr 9, pp. 4-5 (USSR)

ABSTRACT: The article consists of 4 letters from various parts of the Soviet Union, describing the latest achievements of the local DOSAAF organizations, viz.:
1) A letter from Kishinev, signed by N. Ryabov and entitled "With the help of Voluntary Instructors" (S pomoshch'yu instruktorov-obshchestvennikov), which speaks of the interest the young people of the Moldavian SSR show in various aviation sports.
2) A letter from Zaporozh'ye, signed by B. Sumskiy and entitled "Competition in Action" (Sorevnovaniye v deystvii), which relates the course and results of a competition in training young pilots, held between the author and one other pilot-instructor of the same aeroclub.

Card 1/2

85-9-4/33

To Meet the 40th Anniversary of the Great October Revolution (Cont.)

- 3) A letter from Tushino, signed by N. Pryakhina and entitled "Five Records" (Pyat' rekordov), which narrates how the author, a parachutist, succeeded to achieve in the year 1957 five different records.
- 4) A letter from Orsk (Chkalovskaya Oblast', RSFSR), signed by P. Vanin and entitled "Parachutists' Circles in Virgin Lands" (Kruzhek Parashyutistov na Tseline), which deals with the organization of the training of young parachutists in the region. The article contains no data of scientific interest. One photo.

AVAILABLE: Library of Congress

Card 2/2

ASTAKHOV, A.G.; FEIOROVSKIY, N.V.; ARIKHEYEV, V.V.; LAVRENTIK, I.I.;
MAKOVSKIY, V.A.; SIVSKOI, N.A.

Determining the limits of shifting of the maximum temperature
zone along the length of a sintering machine. Met. i gornorud.
prom. no.2:18-20 Mr-Ap '65. (MIRA 18:5)

L 10754-67 EMT(1)/EMF(2)/EMT(2) IJR(e) MM/JM/WZ
ACC NR: AR6016451 SOURCE CODE: UR/0124/65/000/012/B028/B028

39

AUTHOR: Shaparenko, B. A.; Vaynshteyn, B. I.; Sumskoy, P. Ye.

TITLE: On measurement of some parameters which characterize an explosion

SOURCE: Ref. zh. Mekhanika, Abs. 12B196

REF SOURCE: Tr. Gos. Makeyevsk. n.-i. in-ta po bezopasnosti rabot v gorn. prom-sti,
v. 16, 1965, 345-351

TOPIC TAGS: chemical explosion, explosive charge, sound wave //

ABSTRACT: Acoustic waves and pressure drop during detonation of explosive charges were studied. An MD-37-B moving-conductor microphone was used as the sonic intensity pick-up. The emf induced in the microphone by the sound wave was recorded on an MPO-2 magnetic oscilloscope. The measurements were made in an experimental explosion chamber and in an experimental shaft. PZhV-20 ammonite was used as the explosive. In conducting the experiments, the sonic intensity and pressure drop from detonation of two explosive charges were recorded in the explosion chamber while these same parameters were determined in the shaft for simultaneous explosion of two concentrated explosive charges weighing 0.652 kg each. Resultant data are given for loudness level and pressure drop at various distances between the point of explosion and the microphone. V. Baron. [Translation of abstract]

SUB CODE: 19

Card 1/1

SUMTSEV, A. (Staryy Oskol); GUSEV, Ye., inzh.-mekhanik; MOKROBORODOV, V.
(Sverdlovsk)

Our readers' letters. Za rul. 16 no.12:23 D '58.
(MIRA 12:1)

1. Avtomotoklub, Leningrad.
(Motor vehicles)

Sumtsov, A. I.

N/5
611.91
.S5

Die Buchhaltungsrechnung. Berlin, Die Wirtschaft, 1954.

405 p. Tables.

Translation from the Russian: "Kurs bukhgalterskogo ucheta", Moscow, 1951.

Bibliographical Footnotes.

SUMTSOV, A. I.

Bukhgalterskii uchet v promyshlennosti [Bookkeeping in industry]. Moskva,
Gosfinizdat SSSR, 1953. 103 p.

SO: Monthly List of Russian Accessions, Vol. 7 No. 1 April 1954.

SUMTSOV, A.

N/5
752.21
.S9

Bukhgalterskiy uchet v promyshlennom predpriyatiu (Bookkeeping records in
Industrial enterprises) Moskva, Gosfinizdat, 1953
179 P. tables.

... all budi-piščkoj skripcii (Cyrillic in the theory of
printing) for J. Peter. Ljublj., 10. st. d. t., 1/56.
16 p. 1 blue.

ZLOBIN, Pavel Iosifovich; SUMTSOV, A.I., redaktor; TARAYEVA, Ye.K.,
redaktor izdatel'stva; TOLSTY, A.M., tekhnicheskiy redaktor

[Accounting in contract construction organizations] Sukhgalterskii
uchet v podriadnykh stroitel'nykh organizatsiakh. Moskva, Gos.
izd-vo lit-ry po stroit. i arkhit., 1957. 322 p. (MIRA 10:7)
(Construction industry--Accounting)

VEYTS'IAN, Natau Rakhmil'yavich, prof.; SUMTsov, A., otv.red.; KOROTKOVA, L.,
red.; TELEGINA, T., tehn.red.

[Accounting and analysis] Ocherki po bukhgaltereskomu uchetu
i analizu. Moskva, Gosfinisdat, 1958. 151 p. (MIRA 12:1)
(Accounting)

ZABUDNYY, Nikolay Nikolayevich; SUMTSOV, A., otvetstvennyy red.; PROSHINA, L.,
red. izd-va; LEBEDENOV, A., tekhn. red.

[Accounting for material assets in industry] Bukhgalterskii uchet
material'nykh tsennostei v promyshlennosti. Moskva, Gosfinizdat,
1958. 191 p. (MIRA 11:7)

(Accounting)

SUMTOV, Anatoliy Ivanovich; BAKANOV, M.I., prof., red.; SIMONOV, A.,
red.izd-va; LEBEDEV, A., tekhn.red.

[Course in the theory of accounting] Kurs teorii bukhgalterskogo
ucheta. Pod red. M.I. Bakanova. Moskva, Gosfinizdat, 1958.
315 p.

(Accounting)

SUMTSOV, A.

Use of visual aids in teaching accounting. Buhg. uchet 15 no. 4:32-
40 Ap '58. (MIRA 11:5)
(Accounting—Study and teaching) (Visual education)

DMITRIYEV, Mikhail Vasil'yevich, prof.; DMITRIYEVA, R.I.; PETRUSHEV,
I.M., red.; SUMTSOV, A.I., spetsred.; GERASIMOVA, Ye.S.,
tekhn.red.

[Accounting and analysis of the economic operation of an
industrial enterprise] Bukhgalterskii uchet i analiz kho-
ziaistvennoi deiatel'nosti promyshlennogo predpriatiia.
Moskva, Gosplanizdat, 1959. 50⁴ p. (MIRA 13:2)

1. Starshiy ekonomist Upravleniya finansirovaniya sovnarkhozov
Ministerstva finansov RSFSR (for R.I.Dmitriyeva).
(Accounting) (Industrial management)

SURTSOV, A. S.

Protecting crops from fires. 2. izd. ispr. i dop. Moskva, Ministerstvo komunal'nogo
torgovliye RFSR, 1954. 111 p.

SUMTSOV, Aleksandr Savvich, inzhener; OBUKHOV, F.V., redaktor; NOVOCHADOV, A.G., redaktor; KONYASHINA, A., tekhnicheskiy redaktor.

[Fire prevention in agriculture] Posharnaya profilaktika v sel'skom khozisistve. Moskva, Izd-vo Ministerstva kommunal'nogo khoziaistva RSFSR, 1955. 193 p. (MIRA 9:6)
(Fire prevention) (Agriculture--Safety measures)

SUMTSOV, Aleksandr Savich; AKHMEDOV, V.M., redaktor izdatel'stva; KONYASHINA,
g.D., tekhnicheskiy redaktor

[Fire prevention at harvest time] Posharnaya profilaktika vo vremia
uborki uroshchaya. Moskva, Izd-vo Ministerstva kommunal'nogo khozai-
stva RSFSR, 1956. 45 p. (MIRA 9:11)
(Fire prevention) (Harvesting--Safety measures)

AUTHORS: Kovalenko, A.M., Sumtsov, A.S. SOV/128-58-11-14/24

TITLE: "Anhydrous" Paints for Cast-Iron Castings (Bezvodnyye kraski dlya chugunnogo lit'ya)

PERIODICAL: Liteynoye proizvodstvo, 1958, Nr 11, pp 27-28 (USSR)

ABSTRACT: The preparation of anhydrous paint - used in the production of cast-iron castings with fast drying mixtures - is described. A new anhydrous inflammable paint is recommended for thin-walled castings. Good results were obtained with such inflammable paint on the basis of a diluent of the following composition: 700 - 650 g "R-4" diluent; 100 - 150 g white spirit; 200 g varnish, 450 g black graphite and 150 g argentous graphite.

1. Paints--Preparation 2. Paints--Properties

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L 3767-66 ENT(m)/ENAA(h) GS
ACCESSION NR: AT5023956

UR/0000/65/000/000/0419/0434

AUTHORS: Petryanov, I. V.; Ogorodnikov, B. I.; Suntsov, A. S.

TITLE: On certain properties of fibrous filters FP in rarefied air

SOURCE: Nauchnaya konferentsiya po yadernoy meteorologii. Obinsk, 1964. 194-17,
Radicaktivnyye izotopy v atmosfere i ikh ispol'zovaniye v meteorologii (Radio-
active isotopes in the atmosphere and their use in meteorology); doklady
konferentsii. Moscow, Atomizdat, 1965, 419-434

TOPIC TAGS: filter, aerosol, filtering material, filtration, air filter,
Reynolds number / FPA 15 filter

ABSTRACT: The performance of a number of FP filters (Petryanov Filters) as a
function of air pressure, air velocity, temperature, and space factor was de-
termined. The experimental results are presented in graphs and tables (see Fig.
1 on the Enclosure). These results are compared with those given by equations of
N. A. Fuks and I. B. Stechkina (Dokl. AN SSSR, 147, 5, 1962)

$$\Delta p_p = \frac{4v\mu\alpha}{a^3 \left(-\frac{1}{2} \ln \nu - \mu \right)}$$

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where Δp_p is the filter resistance, ν - space coefficient, η - viscosity of gaseous phase, w - air speed in front of filter, h - filter thickness, a - radius of fiber, and μ 0.5 - 0.75, and also by the equation of G. L. Natanson (Kolloidn. Zh. XXIV, 1, 1962)

$$F = \frac{4\pi\nu w}{2 - \ln Re + \frac{\eta/\beta a}{1 + 2\eta/\beta a}}$$

where F is the force acting on unit length of cylinder, Re - the Reynolds number, ρ - the gas density, and β - the coefficient of sliding friction. An equation for the filter resistance for the filter FPA-15, valid for conditions up to molecular flow, was derived as

$$\Delta p_p = \frac{1.11(\Delta p)_{max} w}{1 + \frac{76.7}{P}}$$

where P is the air pressure in mm Hg. It is concluded that the effectiveness of aerosol filtration by fibrous filters increases with decrease in air pressure. Orig. art. has: 1 table, 7 graphs, and 17 equations.

ASSOCIATION: none

SUB CODE: NP

SUBMITTED: 28Apr65

ENCL: 01

NO REF Sov: 008

OTHER: 009

Card 2/3